4. the need to accord the utmost priority to Hydro power development and add 25000 MW of hydro capacity in the next decade to improve the hydro thermal mix and thereby to enable the optimal utilisation of the installed capacity and thus enhance the reliability of the power systems.

Fire Hazard Due *to* Power Theft

1781. SHRI MURLIDHAR CHANDRA-KANT BHANDARE :

SHRI MAHENDRA PRASAD:

Will the Minister of POWER AND NON-CONVENTIONAL ENERGY SOURCES be pleased to state :

(a) whether Government's attention has been drawn to the report in the Statesman of the 10th.March, 1992, captioned "The power theft, a fire hazard ;

(b) if so, the number of incidents of fire in J.J. Clusters during the year 1991 and 1992, so far, in Delhi and how many of them were attributable to power thefts in Jhuggis through illegal connections; and

(c) what steps have been taken or are being taken to effectively prevent power thefts ?

THE MINISTER OF STATE OF THE MINISTRY OF POWER AND NON-CONVENTIONAL ENERGY SOURCES (SHRI KALP NATH RAI): (a) Yes, Sir.

(b) and (c) Delhi Fire Service received about 149 calls of fires in Jhuggi Jhopri Clusters in 1991-92, out of which about 20 appeared to be due to electric short circuits. DESU has intensified its drive against theft/misuse of power to check this problem. Theft of energy has been made cognizable offence under the Indian Electricity Act, 1910.

World Bank Assistance for Mini-Hydel Projects

1782. SHRI S. MADHAVAN: Will the Minister of POWER AND NON-CONVENTIONAL ENERGY SOURCES be pleased to state;

(a) whether U.N.D.P. and World Bank Energy Sector Management Assistant Programme has found that all the basic requisites for economically viable mini-hydel power generation existed at several sites associated with irrigation, water slorages and the distribution infrastructure in India;

(b) if so, what are the details thereof;

(c) whether the State Governments have made investigations and pre-feasibility studies on those sites and if so, what are the details thereof; and

(d) what steps are being taken to get the assistance from the World Bank to implement these mini-hydel power projects specially in Tamil Nadu ?

THE MINISTER OF STATE OF THE MINISTRY OF POWER AND NON-CONVENTIONAL ENERGY SOURCES (SHRI KALP NATH RAI) : (a) A study has been conducted by the joint UNDP/ World Bank Energy Sector Management Assistance Programme (ESMAP) to review the design and economics of a series of irrigation based mini hydel schemes in the States of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Punjab in collaboration with Department of Non-Conventional Energy Sources and the respective State Electricity Boards/Corporations. The study was concluded last year and its final report has been received.

(b) and (c) A total of 52 irrigation canal/ dam based sites with "Heads" ranging from 3-30 m. have been analysed and structured into few standardized type designs to minimise investment requirements and thereby enhance the economic merits of the schemes. All these sites were previously identified and investigated to at least the pre-feasibility stage by the concerned State Governments. A detailed list of the schemes is given in the Statement *(See* below).

(d) A proposal to get World Bank loan assistance for implementing trie schemes in each of the States including Tamil Nadu covered by the study is being pursued. The proposal is yet to be appraised by the World Bank.

Statement

Standardized Design Specifications For Schemes

State/Scheme	Head	Standardized Design Specifications		
		Discharge Capacity		Energy Production
	(meters)	(m3)	(Kw)	(GWh/yr, @80% eff.
1	2	3	4	5
ANDHRA PRADESH				
Adanki BC 1	4.25	22.5	2.650	3.64
Adanki BC 2	10	22.5	2.1250	6.8
Guntur BC 1	7	22.5	3.1250	17
Guntur BC 2	10	22.5	3.1250	19.8
Guntur BC 3	4.25	22.5	2.650	6.4
Guntur BC 4	7	22.5	2.1250	10.5
Lock-In-Sula	10	22.5	2.1500	16.48
Lower Manair	7	22.5	2.1500	16
KARNATAKA				
Attehala	7	7.5	1.350	2.8
Anveri	15	7.5	2.650	5.26
Brindavan	13	30	3.3500	62
Dvevarebelekere	13	12	1.1000	9.07
Harangi	15	12	3.1500	14.52
Kabini	10	12	3.650	6.25
Kilara	10	12	2.650	5.8
Maddur	13	7.5	2.1000	8.3
Malaprabha	10	12	2.1000	8.08
Mudhol	13	7.5	1.1000	4.86
Nugu	13	12	2.1000	6.15
Rajankollur	15	7.5	3.650	6.33
Shahpur BC 1	7	7.5	3.350	5.1
Shahpur BC 2	7	7.5	3.350	3.9
Shahpur BC 3	7	7.5	3.350	3.65
Shahpur BC 4	7	7.5	3.350	4.15
Shahpur BC 5	10	7.5	2.650	4.88
Shahpur BC 6	7	7.5	1.350	2

1	2	3	4	5
KERALA				
Kuttiyadi PH1.	15	12	2.1500	17.1
Kuttiyadi PH 2	7	12	2.650	5.7
Kuttiyadi PH3.	7	12	2.650	5.7
Peechi I (CBU)	21	10	1.1500	10
Peechi II (RBU)	30	12	2.2500	17.1
Mangalam	10	5	1.350	1.3
Maniyar	15	22.5	6.2500	57.1
TAMIL NADU				
Aliyar	30	5	2.1250	9.32
Amaravathy	21	12	2.1000	10.58
Lower Bhavani	15	30	2.3500	24.25
Peechiparai	10	12	2.650	5.95
Perumchani	15	7.5	2.650	5.1
Sathanur	30	12	2.2500	21.82
Thirumurthy	13	7.5	3.650	7.73
PUNJAB				
Babanpur	3	30	2.650	7
Chakbhai	3	30	2.650	7.2
Chanarthal	3	50	4.1000	29.25
Chupki	3	30	2.650	30
Dalla	4.25	30	2.1000	9.2
Dolowal	3	30	2.650	8.12
Kila	3	30	2.650	6.48
Narangwal	3	30	3.650	8.8
Thablan	3	50	6.1000	44.2
Tugal	3	22.5	3.350	6.5
Salar	3	22.5	2.350	3.44
Sidhana	3	12	2.350	4.12

Source : ESMAP Computations.